

# Glacier retreat: risk reduction and opportunities



## Theme

Climate change

## Country

Peru – Andean Region

## Partners

Ministry of the Environment, National Water Authority, Peruvian General Secretariat for Risk Management, the Ministry of Finance. Partners in regional governments of Ancash, Cusco and Lima; and local authorities.

## General information

Glacier retreat jeopardises lives, natural water supply and key economic activities, such as worldwide hydroelectric energy generation.

## Project objective

The Glaciers Project<sup>+</sup> objective is to prevent the negative effects and take advantage of the opportunities related to glacier melt and retreat.

## Beneficiaries

- Authorities in the Environment, Water, Risks and Energy sectors, regional governments, municipalities and universities
- 1.7m residents of the Santa, Urubamba and Cañete river basins in Peru.

## Budget

Total: CHF 19,000,000

SDC Contribution:

Phase 1: CHF 4,961,986

Phase 2: CHF 5,000,000

Other estimated contributions: CHF 9,038,014

## Duration

November 2011 – September 2018

## Contact

Global Programmes in the Andes

Swiss Cooperation SDC

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The tropical Andes include 99 per cent of the world's tropical glaciers and around 71 percent of them are in Peru. Between 1970 and 2010 over 40 per cent of their surface has been lost. This retreat entails grave changes and hazards for the lives of local communities and ecosystems. The main changes include the formation of new glacial lakes, the exposure of more loose sediment and unstable hillsides, predisposing factors for disaster risks related to landslides and avalanches. In addition, this phenomenon will lead to the loss of water storage capacity, producing a major impact for key services such as hydroelectric energy generation, and drinking water supply. It is however important to highlight that glacier retreat will also entail new opportunities, above all in the regions which could be future natural water deposits and major tourist destinations.

In its first phase, the Glaciers Project was implemented by the consortium composed of CARE Peru and Zurich University, representing the consortium of Swiss scientific entities. The first phase has contributed to the *visibility of the theme, risks and adaptation measures regarding glacier retreat* in the local community and national authorities, such as the Ministry of the Environment, the National Water Authority, the Peruvian General Secretariat for Risk Management, and the Ministry of Finance, which have given priority to developing instruments and methodologies for taking interdisciplinary and multi-purpose action.

This is the context of the second phase of the **Glaciers<sup>+</sup> Project**, in which it will continue to accompany monitoring and capacity-building for tackling risks and using the opportunities created by glacier retreat. In the second phase, it will focus its actions on the river basins of the Santa river in the Ancash region, the Vilcanota and Urubamba rivers in the Cusco region and the Cañete river in the Lima region.

**Glaciers<sup>+</sup>** will help scale up the measures for reducing vulnerability to disaster risk due to the impacts of glacier retreat in the Andean mountain range, but at the same time it will make the most of the opportunities created by glacier retreat. To do so, **Glaciers<sup>+</sup>** will use thorough studies and detailed assessments to implement a series of actions and measures that correspond to the circumstances of the intervention areas, and the framework of major investment.



Schweizerische Eidgenossenschaft  
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Swiss Agency for Development  
and Cooperation SDC

**Lines of action**

- *Advocacy for public policies* to promote the consolidation and extension of public administration and research instruments for promoting successful adaptation measures to tackle disaster risk and climate change in the glacier basins.
- *Capacity-building* to promote risk and opportunity management measures with a multi-purpose focus, generated for new climate scenarios in the hydroelectric sector in the three glacier basins selected in Ancash, Lima and Cusco.
- *Knowledge management* regarding successful adaptation measures for disaster risk and climate change in the glacier basins, with a multi-purpose focus.

**Expected outcomes**

- The public institutions have favourable conditions for scaling up and promoting glacier-related adaptation and risk management measures
- Key stakeholders such as local and regional governments and the private sector put adaptation measures into practice to take advantage of opportunities and manage risk from glacier retreat
- Academia, the public and private sector have skills and knowledge for contributing to the international political dialogue on climate change that meet local demand for risk management and climate change adaptation in the glacier basins.

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**For further information:**

[www.proyectoglaciares.pe](http://www.proyectoglaciares.pe)

[www.cooperacionsuizaenperu.org.pe/cosude](http://www.cooperacionsuizaenperu.org.pe/cosude)